

AMENDMENTS TO THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

Listing of Claims:

1. (Original) A method for allocating a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources that each contain one or more storage volumes, said method comprising:

(a) identifying at least one second data set from which said first data set is to be separated;

(b) identifying any of said plurality of storage resources and any volume thereof that contains said second data set; and

(c) forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by step (b) is excluded from said list, whereby a failure in a storage resource that contains said first storage volume or any storage resource identified by step (b) has a minimal impact on the other thereof.

2. (Currently Amended) ~~The method of claim 1~~ A method for allocating a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources that each contain one or more storage volumes, said method comprising:

(a) identifying at least one second data set from which said first data set is to be separated;

(b) identifying any of said plurality of storage resources and any volume thereof that contains said second data set; and

(c) forming an eligible volume list for selection of said first storage resource according to a

policy such that any storage volume identified by step (b) is excluded from said list, whereby a failure in a storage resource that contains said first storage volume or any storage resource identified by step (b) has a minimal impact on the other thereof, wherein the remainder of said storage volumes are ordered according to said policy to prefer those that meet a preferred separation level ahead of those that do not meet said preferred separation level.

3. (Original) The method of claim 2, wherein said plurality of storage resources include first and second storage resources, said first storage resource is a subsystem of said second storage resource and said preference level includes at least said second storage resource, wherein step (b) identifies said first storage resource as containing said second data set, and wherein step (c) forms said eligible volume list by omitting the storage volumes of said first storage resource from said list and placing any other storage volumes contained in said second storage resource behind any storage volumes of others of said plurality of storage resources in said eligible volume list.

4. (Original) The method of claim 1, wherein step (c) forms said eligible volume list by identifying a group of said plurality of storage resources that are available for allocation to said first data set and by eliminating from said group any of said storage resources identified by step (b).

5. (Original) The method of claim 1, further comprising (d) selecting said first storage volume from said eligible volume list.

6. (Original) A computer that allocates a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources that each contain one or more storage volumes, said computer comprising:

first means for identifying at least one second data set from which said first data set is to be separated;

second means for identifying any of said plurality of storage resources and any volume thereof

that contains said second data set; and

third means for forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by said second means is excluded from said list, whereby a failure in either a storage resource that contains said first storage volume or any storage resource identified by said second means has a minimal impact on the other thereof.

7. (Original) A memory media for causing a computer to allocate a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources that each contain one or more storage volumes, said memory media comprising:

first means for controlling said computer to perform a first operation of identifying at least one second data set from which said first data set is to be separated;

second means for controlling said computer to perform a second operation of identifying any of said plurality of storage resources and any volume thereof that contains said second data set; and

third means for controlling said computer to perform a third operation of forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by said second operation is excluded from said list, whereby a failure in either a storage resource that contains said first storage volume or any storage resource identified by said second operation has a minimal impact on the other thereof.

8. (New) A computer that allocates a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources that each contain at least one storage volume, said computer comprising:

first means for identifying at least one second data set from which said first data set is to be separated;

second means for identifying any of said plurality of storage resources and any volume thereof that contains said second data set; and

third means for forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by said second means is excluded from said list,

wherein a remainder of said storage volumes that are not excluded from the list are ordered according to said policy to prefer those that meet a preferred separation level ahead of those that do not meet said preferred separation level.

9. (New) A computer as in claim 8, where said plurality of storage resources comprise a first storage resource and a second storage resource, where said first storage resource is a subsystem of said second storage resource and said preference level includes at least said second storage resource, where said second means identifies said first storage resource as containing said second data set, and where said third means forms said eligible volume list by omitting the storage volumes of said first storage resource from said list and placing any other storage volumes contained in said second storage resource behind any storage volumes of others of said plurality of storage resources in said eligible volume list.

10. (New) A computer as in claim 8, where said third means forms said eligible volume list by identifying a group of said plurality of storage resources that are available for allocation to said first data set, and by eliminating from said group any of said storage resources identified by said second means.

11. (New) A computer as in claim 8, further comprising means for selecting said first storage volume from said eligible volume list.

12. (New) A memory media for causing a computer to allocate a first data set to a first storage volume of a storage system, wherein said storage system includes a plurality of storage resources

that each comprise at least one storage volume, said memory media comprising computer program instructions to perform operations of:

identifying at least one second data set from which said first data set is to be separated;

identifying any of said plurality of storage resources and any volume thereof that contains said second data set;

forming an eligible volume list for selection of said first storage resource according to a policy such that any storage volume identified by said second operation is excluded from said list; and

ordering the remainder of said storage volumes that are not excluded from the list according to said policy to prefer those that meet a preferred separation level ahead of those that do not meet said preferred separation level.

13. (New) A memory media as in claim 12, where said plurality of storage resources comprise a first storage resource and a second storage resource, where said first storage resource is a subsystem of said second storage resource and said preference level includes at least said second storage resource, where identifying any of said plurality of storage resources identifies said first storage resource as containing said second data set, and where the operation of forming forms said eligible volume list by omitting the storage volumes of said first storage resource from said list and placing any other storage volumes contained in said second storage resource behind any storage volumes of others of said plurality of storage resources in said eligible volume list.

14. (New) A memory media as in claim 12, where the operation of forming forms said eligible volume list by identifying a group of said plurality of storage resources that are available for allocation to said first data set, and by eliminating from said group any of said storage resources identified by said second means.

15.(New) A memory media as in claim 12, where said computer program instructions further

perform an operation of selecting said first storage volume from said eligible volume list.

16. (New) A data processing system comprising a host computer coupled to a storage system comprising storage resources, said host computer comprising a data set separator and a storage system manager, where said data set separator uses a separation policy to identify at least one second data set from which a first data set is to be separated and cooperates with said storage system manager to identify any portion of said storage resources that contains said second data set to form a list of eligible portions of said storage resources in which to store said first data set such that any portion of said storage resources identified as containing said second data set is excluded from the list, and where any non-excluded portions of said storage resources are ordered so as to prefer those that meet a preferred separation level ahead of those that do not meet the preferred separation level.

17. (New) A data processing system as in claim 16, where said storage resources comprise a first storage resource and a second storage resource, where said first storage resource is a subsystem of said second storage resource and a preference level includes at least said second storage resource, where said data set separator identifies said first storage resource as containing said second data set forms said list by omitting storage volumes of said first storage resource from the list and placing any other storage volumes contained in said second storage resource behind any storage volumes of others of said plurality of storage resources in the list.

18. (New) A data processing system as in claim 16, where the preferred separation level corresponds to a hierarchical level of said storage system.

19. (New) A data processing system as in claim 18, where the preferred separation level corresponds to a controller level.

20. (New) A data processing system as in claim 18, where the preferred separation level corresponds to a logical sub-system level.